UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BARRETT RICHARD BOBSEIN,
WILLIAM CHRISTOPHER FINCH,
and
DAVID ALBERT GLEESON

Appeal No. 2005-1332
Application No. 09/774,064

ON BRIEF

Before PAK, WARREN, and TIMM, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1 and 3 which are all the claims pending in the application.

We have jurisdiction over the appeal pursuant to 35 U.S.C. § 134.

INTRODUCTION

Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Japanese Published Unexamined Application 05-170,802 to Hoshino et al. published on July 9, 1993 (Hoshino).[1]

The claims stand or fall together (Brief, p. 4). We select claim 1 to represent the issues on appeal. Claim 1 reads as follows:

> 1. A waterborne pigmented paper or paperboard coating composition comprising pigment comprising 50% to 100%, by weight of said pigment, calcium carbonate and from 1% to 25%, as dry weight by weight of said pigment, of an aqueous polymeric dispersion comprising
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> (c) 95-25% by weight, based on the weight of the solids of said aqueous polymeric dispersion, of a first emulsion polymer having an average particle diameter of 150 to 3000 nanometers and
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> (d) 5-75% by weight, based on the weight of the solids of said aqueous polymeric dispersion, of a second emulsion polymer having an average particle diameter of 40 to 600 nanometers
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> wherein the ratio of said average particle diameter of said first emulsion polymer to said average particle diameter of said second emulsion polymer is from 1.2 to 60,
>
> wherein at least said first emulsion polymer particles, when dry, contain at least one void, and wherein said first emulsion polymer is prepared in the presence of said second emulsion polymer or said second emulsion polymer is prepared in the presence of said first emulsion polymer.

Because the Examiner has established a prima facie case of obviousness, we affirm. Our reasons follow.

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[1]We rely upon and cite to the English translation made of record on March 14, 2005.

OPINION

Hoshino describes a waterborne pigmented paper or paperboard coating composition including, among other things, a pigment containing inorganic pigments and emulsion particles as plastic pigments (Hoshino, ¶ 0016, ll. 6-10). Hoshino notes that hard emulsion particles have been studied as additives for coating agents for reducing coating weight, improving gloss, whiteness, opacity, etc. (Hoshino, ¶ 0002, ll. 1-4). According to Hoshino, the industrial use of these emulsion particles as replacements for inorganic pigments such as kaolin, calcium carbonate, talc, satin, etc. in the paper coating field is increasing (Hoshino, ¶ 0002, ll. 4-7).

Hoshino describes emulsion particles with a bimodal particle distribution (Hoshino, ¶ 0009-10). The Examiner finds, and Appellants do not dispute, that the Examples of Hoshino show the claimed proportion and diameters of the two emulsion polymer particles required by claim 1 (Answer, p. 3; Brief and Reply Brief in their entirety). Nor is there any dispute that the emulsion polymer particles of Hoshino meet the other requirements of the aqueous polymeric dispersion recited in claim 1 (Answer, p. 3; Brief and Reply Brief in their entirety). Appellants' arguments focus instead on the calcium carbonate concentration recited in the claim. The issue, therefore, is whether Hoshino sufficiently describes including calcium carbonate in the composition in an amount sufficient to anticipate the composition of the claim or whether there is a sufficient reason, suggestion, or motivation to add calcium carbonate in the claimed amount such that there is a prima facie case of obviousness.

Anticipation

We agree with Appellants that Hoshino does not disclose each and every limitation of claim 1 with sufficient specificity such that the claimed composition is anticipated. In order to anticipate, Hoshino must clearly and unequivocally disclose the claimed invention or direct those skilled in the art to the invention without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. *In re Arkley*, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972). "Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the similarity of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection." *Arkley*, 455 F.2d at 587-88, 172 USPQ at 526.

The Examiner's finding of anticipation is based upon the disclosure in Hoshino of a concentration of aqueous polymeric dispersion in the range of 3-30% as a preferred embodiment coupled with a disclosure calcium carbonate in a list of six inorganic pigments. But Hoshino, in fact, does not limit the inorganic pigments to the six compounds specifically recited. What Hoshino states is that "[s]ome examples of the inorganic pigments include kaolin, calcium carbonate, talc, satin white, titanium dioxide, etc." Moreover, the only exemplified composition contains an inorganic pigment mixture of 63 parts of kaolin clay with 27 parts of calcium carbonate. Therefore, mixtures are also contemplated. One of ordinary skill in the art, in fact, is

directed to picking and choosing an inorganic pigment from a much larger genus than acknowledged by the Examiner. Moreover, there is no direct disclosure of a pigment mixture containing an amount of calcium carbonate within the claimed range coupled with an amount of emulsion particles in the claimed range of 1-25%. To obtain the composition of claim 1, one of ordinary skill in the art must both pick and choose among the various acceptable inorganic pigments and conduct some experimentation, albeit routine in nature, with regard to the amount of inorganic pigment and emulsion particles to include in the pigment. Therefore, we find the disclosure of Hoshino lacks the specificity required for a finding of anticipation.

Obviousness

The question of obviousness, however, stands on a different footing. As stated above, picking and choosing within the teachings of the prior art is entirely proper in the context of an obviousness rejection. *Arkley*, 455 F.2d at 587-88, 172 USPQ at 526. Routine experimentation involving such parameters as concentration is also proper in the context of obviousness. *See In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). Note also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Claim 1 requires that calcium carbonate be present in the pigment in an amount of 50-100 weight %. The claim further requires that the aqueous dispersion of emulsion polymers be present in an amount of 1-25%, as dry weight by weight of the pigment. The Examiner finds that Hoshino describes, as a preferred embodiment, including the emulsion polymer particles in

an amount of 3-30% by weight of the pigment and concludes, therefore, that the inorganic pigment must be present in an amount of 70-97% by weight of the pigment in that preferred embodiment (Answer, p. 3). Appellants traverse this finding on the basis that "this is not the literal disclosure of Hoshino." (Brief, p. 4). Appellants' traversal is not persuasive because, even though Hoshino does not say it literally, the disclosure is present. The pigment of Hoshino is a combination of inorganic pigments and the emulsion particles as "plastic pigment" (Hoshino, ¶ 0016, ll. 6-9). The amount of emulsion particles is related in Hoshino as a percentage of the "entire pigments." (Hoshino, ¶ 0017, ll. 1-4). Therefore, the percentage of inorganic pigments is the amount which is not emulsion pigment.[2] We, therefore, find adequate factual support in Hoshino for the finding made by the Examiner, i.e., that Hoshino describes by default including inorganic pigment in an amount of from between 97 and 70% by weight of the entire pigment in the preferred embodiment. That Hoshino includes other less preferred embodiments and examples does not, contrary to the arguments of Appellants (Brief, p. 5), somehow negate the disclosure of the preferred embodiment.

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[2]The words "entire pigments" would be understood by one of ordinary skill in the art to be referring to the combination of emulsion particles as plastic pigments and inorganic pigments. This is the case because inorganic and plastic pigments are the only components that make up the pigment. In fact, the plastic pigments are said to be a replacement for inorganic pigments (Hoshino, ¶ 0002, ll. 4-7). Also note that Hoshino calculates the quantity of other components based on the combined amount of inorganic and plastic pigments (Hoshino, ¶ 0016, ll. 19-22). Moreover, the formulation provided on page 22 of the translation of Hoshino further validates the Examiner's interpretation of the reference as the pigment amounts (clay, calcium carbonate and emulsion particles) add up to 100 parts by weight.

We agree with the Examiner that it would have been obvious to one of ordinary skill in the art to select calcium carbonate as the inorganic pigment in the composition of Hoshino as it is expressly suggested in the reference. It follows then that Hoshino suggests the use of a pigment containing 70-97% by weight calcium carbonate as required by claim 1.

Appellants argue that the Examiner has not met his burden in establishing a prima facie case of obviousness because he has not pointed to any disclosure within Hoshino which indicates a realization of the problem faced by Appellants or which would motivate one skilled in the art to form Appellants' composition (Brief, p. 6). This argument is not persuasive for several reasons. First, the prior art need not address Appellants' problem. *In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-1902 (Fed. Cir. 1990)(*en banc*), *cert. denied*, 500 U.S. 904 (1991). Second, Hoshino recognizes both gloss and brightness (whiteness), the properties focused on by Appellants, as important properties to be optimized (Hoshino, ¶ 0008). Third, Hoshino describes dispersions having the bimodal particle composition claimed, describes calcium carbonate as one of the inorganic pigments which can be combined with the emulsion particles and suggests amounts within and/or overlapping those of the claim. Under these circumstances, a case of prima facie obviousness is properly established. Where the difference between the claimed invention and the prior art is some range or other variable within the claims, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990).

We conclude that the Examiner has established a prima facie case of obviousness with respect to the subject matter of claims 1 and 3 which has not been sufficiently rebutted by Appellants. To the extent that Appellants are relying upon a showing of unexpected results to overcome the prima facie case of obviousness, we note that sufficiently probative objective evidence has not been relied upon in this appeal. Attorney arguments in the brief cannot take the place of evidence. *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972).

CONCLUSION

To summarize, the decision of the Examiner to reject claims 1 and 3 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a) is affirmed on the basis of obviousness under § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CHUNG K. PAK Administrative Patent Judge	)
CHARLES F. WARREN Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
CATHERINE TIMM Administrative Patent Judge	)

CT/jrg

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[2] Defendant, by its answer, asserts that the patents in question are invalid for 14 different reasons. Misjoinder or nonjoinder of inventors is simply one of the reasons defendant has alleged. This Court can see no advantage in granting a separate hearing on the issue of nonjoinder or misjoinder; indeed, if such a hearing were granted, the parties might have to produce the same witnesses and evidence two different times. This Court is of the opinion that the issue of nonjoinder or misjoinder of inventors is no more of a threshold legal issue than any of the other grounds asserted for patent invalidity. Accordingly, this Court holds defendant has no right to a separate hearing on the issue of patent invalidity due to misjoinder or nonjoinder of inventors under Rule 42(b) of the Federal Rules of Civil Procedure.

III. Rule 12(d)

Rule 12(b) (7) of the Federal Rules of Civil Procedure allows a party to move to dismiss a claim for failure to join a party under Rule 19. Rule 12(d) states:

> The defenses specifically enumerated (1)-(7) in subdivision (b) of this rule, whether made in a pleading or by motion " " " shall be heard and determined before trial on application of any party, unless the court orders that the hearing and determination thereof be deferred until the trial.

[3] Defendant apparently asserts the alleged nonjoined or misjoined inventors are necessary parties to this suit under Rule 19. This contention is without merit. The inventors are not necessary parties for a just adjudication of this suit; they are only involved tangentially in the instant case in that their nonjoinder or misjoinder in the patent application may have rendered the patent invalid. Accordingly, this Court holds defendant has no right to a separate hearing on the issue of patent invalidity due to misjoinder or nonjoinder of inventors under Rule 12(d) of the Federal Rules of Civil Procedure.

Accordingly, it is hereby ordered, adjudged and decreed that defendant's motion for a separate hearing on the issue of patent invalidity due to nonjoinder or misjoinder of inventors is denied.

Court of Customs and Patent Appeals

In re ARKLEY, EARDLEY, AND LONG

No. 8553 Decided Feb. 17, 1972

PATENTS

1. Patentability — Anticipation — In general (151.201)

Patentability — Invention — In general (151.301)

Fact that rejections under 35 U.S.C. 103 are proper where subject matter claimed "is not identically disclosed or described" in prior art indicates that rejections under section 102 are proper only when claimed subject matter is identically disclosed or described in prior art.

2. Court of Customs and Patent Appeals — In general (128.01)

Court does not grant patent where it reverses rejection of claim; it is Patent Office which grants patents, not the court.

3. Court of Customs and Patent Appeals — In general (128.01)

Pleading and practice in Patent Office — Rejections (154.7)

Court's reversal of rejection of claim on ground that it is anticipated by reference under 35 U.S.C. 102 leaves Patent Office free to reject claim as obvious under section 103 in view of reference since such latter rejection was not before court.

4. Court of Customs and Patent Appeals — Weight given decisions below (128.35)

It is not court's practice to apply a different standard in cases in complex areas of technology than it does in easily understood cases.

Particular patents—Cephaloridine

Arkley, Eardley, and Long, Cephaloridine, rejection of claim 30 reversed.

Appeal from Board of Appeals of the Patent Office.

Application for patent of Vincent Arkley, Stephen Eardley, and Alan Gibson Long, Serial No. 329,212, filed Dec. 9, 1963; Patent Office Group 120. From decision rejecting claim 30, applicants appeal. Reversed; Baldwin, Judge, concurring with opinion in which

Almond, Judge, joins; Worley, Chief Judge, dissenting with opinion.

J. William Pike and Bacon & Thomas, both of Washington, D. C. (Fred T. Williams, John J. Cavanaugh, and Pendleton, Neuman, Williams & Anderson of counsel) for appellants.

S. Wm. Cochran (Jack E. Armore and Henry Willard Tarrino II of counsel) for Commissioner of Patents.

Before Worley, Chief Judge, and Rich, Almond, Baldwin, and Lane, Associate Judges.

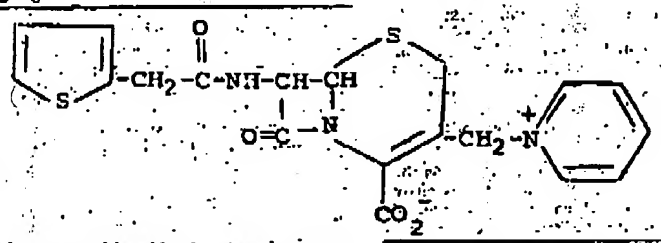
Rich, Judge:

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claim 30 in appellants' application serial No. 329,212, filed December 9, 1963, for a cephalosporin-type antibiotic known as cephaloridine. No claim has been allowed. We reverse.

The Subject Matter Claimed

The appealed claim is drawn to a single compound, by structural formula, and reads:

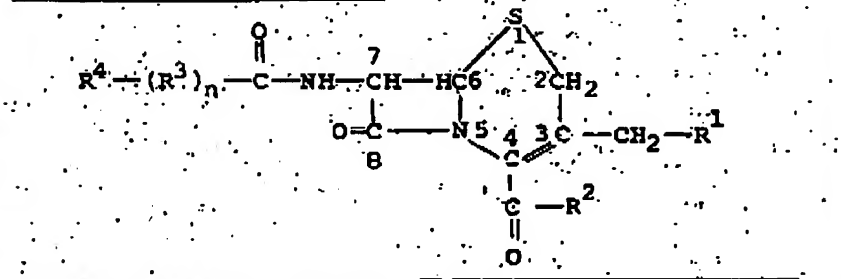
30. A compound of the formula



This compound is said to be a broad spectrum antibiotic, effective against both gram-positive and gram-negative micro-organisms, and to possess many other virtues not relevant here because of the nature of the rejection.

The Rejection

Appellants' claim has been rejected as *anticipated* by U. S. patent No. 3,218,318, issued to Edwin H. Flynn November 16, 1965, on an application filed in the United States August 31, 1962, and available against appellants' application by virtue of 35 U.S.C. 102(e) as of its filing date. This reference discloses generically a class of cephalosporin-type compounds having the following structural formula:



in which R^1, taken alone, is —OH, C1-C6 acyloxy, or tertiary-amino, R^2 is —OH when R^1 is —OH, R^2 is —OH when R^1 is C1-C6 acyloxy, R^2 is —O⁻ when R^1 is tertiary-amino, R^1 and R^2, when taken together, are —O—, n is zero or 1, R^3 is C1-C6 alkylene, and R^4 is a heteromonocyclic radical containing O, S, and/or N. Appellants "conservatively" estimate that over 230,000 compounds (including, concededly, theirs) are embraced within this generic disclosure, and the board in turn conceded that, "If this were the only antiticipatory disclosure in the reference," the disclosure would be "too diffuse" to support a 102 rejection.

However, the board found: (1) that Flynn's examples 4 and 10 "adequately disclose the exact precursors of the presently claimed compound"; (2) that Flynn's statement that

Cephalosporin C is also readily converted into compounds of the cephalosporin C_A

type by refluxing in aqueous solution with an excess of pyridine, for example, as described in Belgian Patent 593,777.

was adequate to teach how to convert the C-type precursors disclosed in examples 4 and 10 to the C_A-type compound claimed by appellants; and (3) that Flynn's statement that, "in general, those compounds which possess the cephalosporin C_A nucleus are more effective antibacterially than those containing the cephalosporin C nucleus", provided the "motive * * * to follow this additional teaching * * *." Putting these three findings together, the board held that

> The indicated combination of Example 4 or 10 with * * * [the teaching of how to convert "Cephalosporin C * * * into compounds of the cephalosporin C_A type"] is not a matter of obviousness within the meaning of 35 U.S.C. 103 but of direct teaching within the four corners of the patent.

The effect of this holding, of course, was that the board did not have to look at the extensive objective evidence which appellants had offered to rebut any inference of obviousness which might be thought to arise from the teachings of the Flynn patent.

Opinion

[1] The sole issue in this case is whether cephalbridine is "described" in the Flynn patent within the meaning of that word in 35 U.S.C. 102(e).[1] It is to be noted that rejections under 35 U.S.C. *103* are proper where the subject matter claimed "is not *identically* disclosed or described" (emphasis ours) in "the prior art," indicating that rejections under 35 U.S.C. 102 are proper only when the claimed subject matter is identically disclosed or described in "the prior art." Thus, for the instant rejection under 35 U.S.C. 102(e) to have been proper, the Flynn reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. Such picking and choosing may be entirely proper in the making of a 103, obviousness rejection, where the applicant must be afforded an opportunity to rebut with objective evidence any inference of obviousness which may arise from the *similarity* of the subject matter which he claims to the prior art, but it has no place in the making of a 102, anticipation rejection.

In this case we have no difficulty in deciding that the portions of the Flynn reference relied upon by the Patent Office do not identically describe the claimed subject matter. As appellants point out, the compounds of Flynn's examples 4 and 10 are the "exact precursors" of appellants' compound "only to the extent that appellants have discovered that cephaloridine will be formed if the acid [disclosed in example 10] is first selected and *then* carefully reacted with a particular tertiary amine *which also must be selected*." (Emphasis in original.) Of course, it does appear that the "particular tertiary amine" to which appellants refer is pyridine, which is mentioned elsewhere in Flynn as an example of the class of reactants with which a particular cephalosporin C-type compound (namely, cephalosporin C itself) may be converted into compounds of the cephalosporin C_A type, but there is nothing in the teachings relied upon by the Patent Office which "clearly and unequivocally" directs those skilled in the art to make this selection nor any indication that Flynn ever made the selection himself. Similarly, while it is reasonable to suppose that Flynn's teaching that "in general, those compounds which possess the cephalosporin C_A nucleus are more effective antibacterially than those

[1] At one time appellants contended that Flynn was not in "enabling disclosure," In re LeGrice, 49 CCPA 1124, 301 F.2d 929, 133 USPQ 365 (1962), but we gather that they have "abandoned" that contention on appeal; although there is still an ambiguous reference to LeGrice in their briefs.

[2] The parties argue, in essence, about whether the words "[for example," in the sentence "Cephalosporin C is also readily converted into compounds of the cephalosporin C_A type by refluxing in aqueous solution with an excess of pyridine, for example, as described in Belgian Patent 593,777" refers to the word "pyridine" or the words "as described." Appellants argue that "it is to be stressed that pyridine is only being suggested as an *example* of the tertiary amine(s) suitable for the reaction with the prior art compound cephalosporin C," while the solicitor seems to be taking the position that Flynn's specification would be read as indicating that the Belgian patent was one place among many where those skilled in the art could learn how to react cephalosporin C with pyridine. While the matter is not free from doubt, we think it more likely that the sentence would be read in the former way because the presence of the word "type" after "C_A" and not after "C" suggests that one particular C-type compound (namely, cephalosporin C itself) can be changed into various C_A-type compounds by refluxing it with an excess of the proper reactant. This interpretation of the controverted sentence is reinforced by the next sentence in Flynn's specification, which is as follows:

> The reaction is applicable in general to the tertiary amines, of which numerous examples are given above, yielding corresponding derivatives of the cephalosporin C_A type wherein the tertiary amine is attached to the methyl group in the 3 position of the thiazine ring, and forms an inner salt with the carboxyl group in the 4 position.

containing the cephalosporin C nucleus" would provide some "motive" for those that followed him to concentrate their investigations on compounds possessing the cephalosporin C_A nucleus, that motivation is a very general one, pointing to no particular one of the myriads of compounds, actual and potential, containing the cephalosporin C_A nucleus.

The board, apparently recognizing the weakness of its position in attempting to arrive at an anticipation by combining the disclosures in examples 4 and 10 with the above-quoted teaching elsewhere in the patent of how to convert a particular, different cephalosporin C-type compound into cephalosporin C_A-type compounds, postulates certain teachings which might have been in the reference patent any one of which, according to it, if present, would have removed all doubt concerning the completeness of the anticipation.[3] The simple answer to the board's argument is that these teachings were not contained in the Flynn patent and that we do not regard the teachings which were there and which *were* relied upon below as the equivalent of those which were postulated by the board. We do not read into references things that are not there.

Although the board declined to discuss four relatively recent decisions by this court in cases involving description requirements in various sections of the patent statute[4] on the ground that "the issue [of anticipation] is essentially a factual one," it did consider the older case of In re Armstrong, 47 CCPA 1084, 280 F.2d 132, 126 USPQ 281 (1960), to be "apposite on this point." There this court reversed the board, finding support for process claims reciting the use of sodium carbonate although the example in the specification advanced as support for the claims used sodium hydroxide. However, in the first place, the Armstrong case was decided well before the line of cases beginning with Ruschig II, supra,[5] which have significantly tightened up on the application of the description requirement in the first paragraph of 35 U.S.C. 112, and, in the second place, the opinion in Armstrong points out that appellants' specification stated that alkali hydroxides and alkali carbonates could be used "interchangeably" in their process. The opinion stresses this equivalency, which involved a tiny number of variables in comparison to the situation here. There are no equivalent "blaze marks," to quote the language of Ruschig II, in the case at hand.

Accordingly, we will not sustain the rejection on the ground on which it was made. Concerning the rejection as it is reformulated by the dissent, we express no opinion. It may be that the Patent Office *should* have relied upon the portions of Flynn on which the dissent relies, or it may be that they had very good reasons for not doing so. In any event, they did not rely on those teachings in Flynn, and appellants have therefore had no opportunity to comment thereon. We do not conceive that it is part of our duty to make better rejections for the Patent Office, even if we could be sure that we really were making a "better rejection," nor do we think that it would be consistent with the requirements of due process for us to do so for the first time on appeal, without notice to the affected party.

[2] Furthermore, we point out that we are not granting appellants a patent, if that is what the dissent means by "bestowing on the applicants a license to litigate." We are simply reversing a rejection on the ground that the claim on appeal is *anticipated* under § 102 by Flynn. It may well be that it is unpatentable because *obvious* under § 103 in view of Flynn, [3] but no such rejection is before us. The Patent Office is free to make such a rejection after our decision in this case should it think it appropriate. In re Ruschig, 54 CCPA 1551, 379 F.2d 990, 154 USPQ 118 (1967); and In re Fisher, 58 CCPA [illegible], 448 F.2d 1406, 171 USPQ 292 (1971). In any event, it is the Patent Office which grants patents, not this [4] court. It may further be observed that

[3] These postulations were contained in the following passage from the board's opinion:

> There would be no doubt of the completeness of the anticipation if, paraphrasing column 3, lines 47 to 50, the following language were present at the end of each of Examples 4 and 10:
>
> "This compound is also readily converted into a compound of the cephalosporin C_A type by refluxing in aqueous solution with an excess of pyridine, for example, as described in Belgian Patent 593,777."
>
> Likewise, there would be no question of the applicability of column 3, lines 47 to 50, if that sentence were introduced by the words "Any one of the compounds of Examples 1 to 15 is also readily converted into compounds of the C_A type * * *" or "Any one of the herein specifically named cephalosporin C compounds is also readily converted into compounds of the C_A type * * *".

[4] In re Ruschig, 52 CCPA 1238, 343 F.2d 965, 145 USPQ 274 (1965); In re Kalm, 54 CCPA 1466, 378 F.2d 959, 154 USPQ 10 (1967); In re McLaurin, 54 CCPA 1544, 379 F.2d 985, 154 USPQ 144 (1967); and In re Ruschig, 54 CCPA 1551, 379 F.2d 990, 154 USPQ 118 (1967) (Ruschig II).

[5] Among the most recent of these are, In re Ahlbrecht, 58 CCPA 848, 435 F.2d 908, 911, 168 USPQ 293, 296 (1971); In re Luksch, 58 CCPA 1233, 442 F.2d 967, 969, 169 USPQ 795, 796 (1971); and Fields v. Conover, 58 CCPA 1366, 443 F.2d 1386, 1391-92, 170 USPQ 276, 279-80 (1971).

it is not now the practice in this court, if it ever was, to apply a different standard in cases which are in "complex areas of technology" than we do in easily understood cases.

The decision of the board is *reversed*.

BALDWIN, Judge, concurring, with whom ALMOND, Judge, joins.

While I agree that the disclosure in the Flynn patent is insufficient to constitute an anticipation of the claimed invention, I cannot agree with the language of the principal opinion that for the rejection based on an anticipation to have been proper, "the Flynn reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference."

The test which determines whether an invention has been anticipated by a reference is whether the description of the invention in the reference is "sufficient to put the public in possession of the invention." In re LeGrice, 49 CCPA 1124, 1131, 301 F.2d 929, 933, 133 USPQ 365, 369 (1962), citing Curtis on Patents, 3d ed., Sec. 378 and Seymore v. Osborne, 78 U.S. (11 Wall.) 516, 555 (1870). See also In re Brown, 51 CCPA 1254, 329 F.2d 1006, 141 USPQ 245 (1964); In re Sheppard, 52 CCPA 859, 339 F.2d 238, 144 USPQ 42 (1964); In re Bird, 52 CCPA 1290, 344 F.2d 979, 145 USPQ 418 (1965); In re Borst, 52 CCPA 1398, 345 F.2d 851, 145 USPQ 554 (1965); In re Baranauckas, 55 CCPA 1204, 395 F.2d 805, 158 USPQ 24 (1968); In re Hoeksema, 55 CCPA 1493, 399 F.2d 269, 158 USPQ 596 (1968); In re Wilder, 57 CCPA 1314, 429 F.2d 447, 166 USPQ 545 (1970); and In re Moore, 58 CCPA 1341, 444 F.2d 572, 170 USPQ 260 (1971). I find it unreasonable to assume that Judge Rich and Judge Lane intend to overrule this long line of cases sub silentio. If what they intend is merely to rephrase the accepted test so as to simplify its application, they have missed the mark.

The language used in the principal opinion would not in fact simplify the determination of the suitability of a reference as an anticipation under 35 U.S.C. 102. That language requires the tribunal to analyze the teachings of a reference to determine which are equivocal and which are unequivocal. It must also be determined which disclosures are directly related to each other by the teachings of the reference, thus making picking and choosing proper, and which disclosures are only indirectly related, or are not related at all. This is no simpler than reading the reference as a whole and determining what it fairly teaches to one of ordinary skill in the art.

The more important difficulty with the position taken in the principal opinion is that it misdirects the inquiry. It directs the tribunal to analyze the structure of the reference rather than its content. The real question is not how logically the various disclosures in a reference are related to each other, it is rather *what the reference fairly teaches to one of ordinary skill in the art*, no matter how ineptly it does so. Of course, the more logically the reference is laid out the clearer will be its teachings and the easier will be the job of those who must interpret it. But the law requires us to determine whether the invention has been *identically* described, *not* whether it has been *logically* described by the reference.

The Flynn reference has been described in both the principal opinion and the dissent. I will therefore merely state what I would consider that reference fairly teaches to one of ordinary skill in the art. Flynn does disclose the cephalosporin C_A-type precursor of the instantly claimed C_A-type compound. The precursor is one of approximately 38 C-type compounds specifically disclosed. Flynn teaches how C-type compounds can be converted to C_C-type compounds by heating with water under acid conditions, or converted to C_A-type compounds by refluxing in an aqueous solution with an excess of a tertiary amine. Pyridine is specifically referred to as an example of a tertiary amine which will work, but a list of over 15 other tertiary amines is given. With regard to antibacterial effect, Flynn discloses that C_C-type compounds are not as good as C-type compounds, and C-type compounds are not as good as C_A-type compounds. As pointed out by the dissent, Flynn considered the C_C-type and C_A-type analogues of the specifically disclosed C-type compounds to be some of the compounds "available in accordance with the present invention."

I would not place as much weight as the dissent does on Flynn's statement that the C_C-type and C_A-type analogues were considered within the scope of the invention. Such statements in the specification regarding the breadth of the invention are generally too speculative to be given great weight. In the instant case, all that statement does is focus some additional attention on C_C-type compounds and C_A-type compounds. In my view, that attention is not a significant addition to the disclosure, since Flynn's remarks regarding the antibacterial activity of the compounds are sufficient to emphasize the C_A-type compounds as the most desirable. The difficulty is that Flynn gives 38 or so possible precursors and 15 or so tertiary amines which will react with those precursors to form C_A-

type compounds. The Flynn disclosure, considered as a whole, does not sufficiently direct one skilled in the art to the claimed compound.

I disagree with the principal opinion on one last point. The opinion seems to suggest that we violate due process whenever we consider portions of a reference not specifically mentioned by the examiner or the board. I know of no requirement that the examiner and the board must list the sentences in the reference upon which they rely, nor can I see any sense in imposing such a requirement. All of the disclosure of a reference must be considered for what it fairly teaches one of ordinary skill in the art. In re Meinhardt, 55 CCPA 1000, 1004, 392 F.2d 273, 276, 157 USPQ 270, 272 (1968). As Judge Smith aptly stated in Meinhardt:

> [T]he board relied on the same [reference] as the examiner to sustain the rejection. Assuming arguendo that the board relied on a portion of the [reference] ignored by the examiner, this could not constitute a new ground of rejection in view of In re Azorlosa, 44 CCPA 826, 241 F.2d 939, 113 USPQ 156 (1957), which holds, in pertinent part, that it is proper for the court and necessarily, the board, to consider everything that a reference discloses.

In re Meinhardt, supra, 55 CCPA at 1008-09, 392 F.2d at 280, 157 USPQ at 275. See also In re Halley, 49 CCPA 793, 296 F.2d 774, 132 USPQ 16 (1961); In re Van Mater, 52 CCPA 1076, 341 F.2d 117, 144 USPQ 421 (1965).

WORLEY, Chief Judge, dissenting.

I cannot agree with the majority that cephaloridine is not "described" in the Flynn patent in the sense of 35 U.S.C. 102(e).

It cannot be said, of course, that cephaloridine per se is *explicitly* named by Flynn, but a clear implicit description is sufficient. In re Baranauckas, 43 CCPA 727, 228 F.2d 413, 108 USPQ 226 (1955). Reference to the Flynn disclosure will establish, I submit, that such a description exists in the present instance.

The principal opinion has set forth portions of the generic and more specific disclosure of Flynn relied on by the board. The class of cephalosporin compounds disclosed generically by Flynn may be divided into several groups, of which the groups designated as cephalosporin C type and cephalosporin C_A type (cephaloridine is a C_A type) are of particular interest here.[1] After observing that "in general, those compounds which possess the cephalosporin C_B nucleus are more effective antibacterially than those containing the cephalosporin C nucleus," Flynn goes on to name and describe several specific compounds having the cephalosporin C nucleus:

> The *following examples*, together with the [75] *operating examples* appearing hereinafter, will illustrate the types of compounds available *in accordance with the present invention:*
>
> [There follows a list of 24 specific 7-acylamidocephalosporanic acids, i.e., cephalosporin C type compounds. As noted by the board, two of the 15 operating examples referred to, examples 4 and 10, describe the potassium and sodium salts of 7-(2'-thienyl-acetamido) cephalosporanic acid (the sodium salt is known commercially as "cephalothin"). Applicant reacts that particular cephalosporanic acid with the tertiary amine pyridine to obtain the claimed cephalosporin C_A type compound, cephaloridine.]
>
> and the like, *including* the *cephalosporin* C_A and cephalosporin C_C *analogues thereof.* [Emphasis supplied.]

There can be no doubt from the above disclosure that Flynn regarded the cephalosporin C_A analogues of each of the mentioned cephalosporin C type compounds to form an integral part of his disclosed invention. In particular, it is evident that Flynn does explicitly disclose the cephalosporin C_A analogues of Examples 4 and 10. As to how to obtain those C_A analogues from cephalosporin C type compounds, he states that compounds of the cephalosporin C_A class "can be obtained by applying to appropriate 7-acylamidocephalosporanic acids the conversion procedures of Belgian Patent 593,777." Flynn had earlier stated, as pointed out by the board and majority here, just what those "conversion procedures" are, viz., "that "Cephalosporin C is also readily converted into compounds of the cephalosporin C_A type by refluxing in aqueous solution with an excess of *pyridine*, for example, as described in Belgian Patent 593,777."[2] [Emphasis supplied.]

[1] For purposes here, cephalosporin C_A type compounds differ from cephalosporin C type compounds in the R^1 substituent attached to the methyl group located at the 3 position of the basic cephalosporin (cepham) nucleus. The C_A type compounds have a tertiary amine attached to this methyl group, whereas the C type compounds have an acyloxy group so attached. See the formula and definitions under "The Rejection" portion of the principal opinion. Cephaloridine has a pyridine radical attached to the 3-methyl group.

[2] Belgian 593,777 does indeed disclose obtaining of "antibiotic substances which are transformation products of Cephalosporin C and are called

I think it is clear that Flynn directs one of ordinary skill in the art, who is interested in particular cephalosporin C_A analogues of the 37 or so cephalosporin C type compounds Flynn specifically discloses, to prepare them by reacting the appropriate 7-acylamido cephalosporanic acid with the particular tertiaryamine pyridine. Following those instructions, one of ordinary skill in this art would easily prepare the C_A (pyridine) analogue of the particular cephalosporin C type compound described in Examples 4 and 10, which analogue is cephaloridine. Each and every one of the C_A (pyridine) analogues of that relatively small number of cephalosporin C compounds has been effectively, or implicitly, described by Flynn. To be sure, appellant is claiming only one of them, but it is no less described than any of the others.

From what has been said of Flynn, it should be evident that there is no need in this case for those skilled in the art to resort to picking and choosing various disclosures unrelated to each other by the reference teachings, as the principal opinion implies. On the contrary, the disclosures of cephalosporin C compounds, cephalosporin C_A compounds, and how to make them are all interrelated by Flynn himself. It should also be evident that the reference itself contains the full equivalent of the board's "postulations", which are quoted in footnote 3 and later deprecated in the principal opinion. Finally, it should be evident that the rejection rationale as stated herein is substantially identical to—not a reformulation of—that expressed by the board.

The principal opinion also criticizes the board for reading into references "things that are not there." My difficulty with that position stems from its disregard for the "things"—or "blaze marks"—that *are* there. In my opinion, the majority is groping for reversible error where none exists. As far back as 40 years, and over the years since, it has been a firm principle that this court would not reverse decisions of the tribunals below in highly complex areas of technology unless manifest error was shown. See, e.g., In re Wiezel, 17 CCPA 1079, 39 F.2d 669, 5 USPQ 177 (1930); In re Bertsch, 30 CCPA 813, 132 F.2d 1014, 56 USPQ 379 (1942); In re Stoll, 34 CCPA 1058, 161 F.2d 241, 73 USPQ 440 (1947). Needless to say, such error has not been shown here.

Although the majority would undoubtedly disclaim the notion, I cannot help but feel that it is resolving doubt on the issue presented in favor of the applicants. In doing so, this court is not doing the applicants or the public any favor. Rather it is bestowing on the applicants a licence to litigate of dubious validity at a time when, it is reliably estimated, 80% of contested patents are being held invalid in other federal courts. And the other sad result here is to take from the public that which is already theirs by imposing on them a monopoly that should not exist. Appellants have given the public nothing it had not already been given by Flynn. I would remind my colleagues that patents are not like party favors to be passed out at random. The enabling statutes established under the Constitution clearly require more than appellants have offered as a quid pro quo to the public in exchange for the monopoly the majority awards them.

I find no error in the board's decision, and would affirm.

"Cephalosporin C_A compounds" by "treatment of Cephalosporin C in aqueous solution with a weak tertiary base, for example pyridine, collidine or quinoline. If pyridine is used the antibiotic obtained is called Cephalosporin C_A (pyridine)."

Court of Customs and Patent Appeals

In re MANTELL, SMITH, CALIANO, AND RANKIN

No. 8577 Decided Feb. 17, 1972

PATENTS

Particular patents—Formaldehyde

Mantell, Smith, Caliano, and Rankin, Formaldehyde Block Copolymers and Processes, claims 6, 16, and 18 of application allowed; claims 1 and 3 refused.

Appeal from Board of Appeals of the Patent Office.

Application for patent of Gerald J. Mantell, Wayne E. Smith, Francis R. Caliano, and David Rankin, Serial No. 313,192, filed Oct. 2, 1963; Patent Office Group 140. From decision rejecting claims 1, 3, 6, 8, 9, 11, 12, 16, and 18, applicants appeal. Affirmed as to claims 1 and 3; reversed as to claims 6, 16, and 18; remanded as to claims 8, 9, 11, and 12.

WILLIAM H. DRUMMOND, Phoenix, Ariz., ERIC P. SCHELLIN, Arlington, Va., and RICHARD L. KELLY, Kansas City, Mo., for appellants.

S. WM. COCHRAN (FRED. W. SHERLING, of counsel) for Commissioner of Patents.